REMARKS

The Office Action dated September 6, 2005 has been received and reviewed by the applicant. Claims 1-19 are in the application. Claims 1-8 and 12-19 stand rejected and claims 9-11 have been withdrawn from consideration. Claims 1 and 12 are amended. Reconsideration is respectfully requested.

Claims 1-8 and 12-19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US 6,040,593) in view of Rhodes (US 6,852,591). Claims 1 and 12 are now amended to include "a ***single crystal*** semi-conducting layer, which is less than approximately 1 micrometer, spanning the dielectric which contains electrodes and circuit elements that control flow of charge" in combination with the other claimed elements. The claims are amended to more clearly define the invention. In summary, the present invention provides a structure in which the circuit elements are put in a conductive, thin (less than 1 micrometer) single crystal layer which has good conductive properties suitable for circuit elements, and the photo-sensitive region is put in the substrate which includes a larger volume that is suitable for collecting charge.

In contrast, the cited art (Rhodes) includes "Conductive layer 108 [which] is formed of a doped polysilicon or other transparent conductors. The thickness of the conductive layer 108 in photogate 102 may be any suitable thickness, e.g., approximately 200 to 5000 Angstroms." Column 8, lines 58-62. It is noted that the photogate 102 is formed from the conductive layer 108. This is clearly an opposite teaching from amended claims 1 and 12. First, Rhodes teaches the charge-collecting region (i.e, ***photogate***) is the less than 1 micrometer layer which is not as suitable as the substrate for the "photo-sensitive region" as in the claimed invention. Secondly, and just as important, the claimed invention includes putting the circuit elements in the single crystal, less than 1 micrometer layer which is a suitable conductor for circuit elements, yet thin and spatially economical. Rhodes includes putting the "photogate" in the "200 to 5000 Angstroms" "polysilicon" layer which is not as suitable as the substrate layer for the charge-collecting region as in the claimed invention, and more importantly, circuit elements will not function properly in polysilicon. Therefore, combining Rhodes with Park does not teach or suggest the claimed invention since the purported teaching of Rhodes does not combine with Parks to teach or suggest the claimed invention. Therefore, it is respectfully submitted that the cited art, in

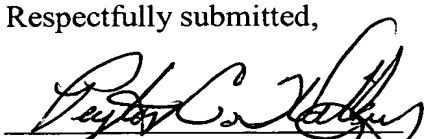
fact, makes the case for patentability of the claimed invention since the prior teaches away from the invention as now claimed.

The rejection states that generally thickness does not support patentability without some indication of it being critical. It is pointed out that there is neither "no heart of the invention" concept (see Para-Ordnance Manufacturing, Inc. v. SGS Importers International, Inc., 37 USPQ2d 1237 (Fed. Cir. 1995)) nor a per se rule in the statutes or case law against a thickness limitation as being unpatentable unless being "critical." It is the claimed "combination" which is patentablity. Even still, producing smaller, yet powerful, devices is clearly always desirable. The claimed invention includes the advantage of creating a small sensor by putting the circuit elements in the thin, conductive layer and the photosensitive region in the substrate which includes a larger volume for collecting charge.

In light of the above amendments and arguments, it is respectfully submitted that the claimed invention as now claimed is patentable and an early Notice of Allowance is respectfully requested.

Should the Examiner consider that additional amendments are necessary to place the application in condition for allowance, the favor is requested of a telephone call to the undersigned counsel for the purpose of discussing such amendments.

Respectfully submitted,



Attorney for Applicant(s)
Registration No. 36,390

Peyton C. Watkins/lam
Rochester, NY 14650
Telephone: 585-477-8282
Facsimile: 585-477-4646

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.